JPRS 76605

10 October 1980

USSR Report

TRANSPORTATION

No. 24

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service (NTIS), Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semimonthly by the NTIS, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Indexes to this report (by keyword, author, personal names, title and series) are available through Bell & Howell, Old Mansfield Road, Wooster, Ohio, 44691.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

Soviet books and journal articles displaying a copyright notice are reproduced and sold by NTIS with permission of the copyright agency of the Soviet Union. Permission for further reproduction must be obtained from copyright owner.

JPRS 76605

10 October 1980

USSR REPORT

TRANSPORTATION

No. 24

CONTENTS

AIR

French Newspaper Reports 'Chaos' at Moscow Airports
(LE FIGARO, 29 Aug 80) 1

RAILROAD

Officials Take Part in Railroad Workers' Day Meeting
(GUDOK, 1 Aug 80) 3

Idle Cars, Other Belorussian Railroad Problems Discussed
(PROMYSHLENNOST' BELORUSSII, No 7, 1980) 11

OCEAN AND RIVER

Review of Maritime Fleet's Plan Fulfillment
(V. Nikolaychuk; MORSKOY FLOT, No 8, 1980) 17

Problems in Ship Repair Services Cited
(A. Petrov; VODNYY TRANSPORT, 16 Sep 80) 25

Finnish Press; Increased Finn-USSR Maritime Cooperation
(HELSINGIN SANOMAT, 3 Sep 80) 30

Finland May Join Tallinn Port
(UUSI SUOMI, 29 Aug 80) 32

More Balanced Traffic, Increase Sought Between Finland, USSR
(HELSINGIN SANOMAT, 29 Aug 80) 33

Briefs
    Nikolayevsk Ship Repair Plant 35
    Dock Towed to Baltic 35
    Vanino-Kholmsk Ferry Terminal 35

MISCELLANEOUS

Progressive Forms of Transportation for Coal, Ore Concentrates
(Ye. Olofinskiy; PLANOVOYE KHOZYAYSTVO, Aug 80)........ 36

Newspaper Advertises Transport Services to Iran
(MOSCOW NEWS, various dates)............................ 46

By FESCO Vessels, Trains
By Baltic Vessels, Trains

FRENCH NEWSPAPER REPORTS 'CHAOS' AT MOSCOW AIRPORTS

Paris LE FIGARO in French 29 Aug 80 p 3

[Article: "Mysterious Chaos at Moscow Airports"]

[Text] Thousands of passengers have been stranded for several days in the domestic flight airports in Moscow. The official explanation is bad weather. But foreign observers have been wondering about this chaos.

The Domodyedovo airport, 50 miles from Moscow, opens the route to Siberia and Central Asia, a route which has been cut off for 4 days: thousands of passengers, crammed into the airport's modern waiting room, are waiting in vain for the departure, their eyes riveted on flight boards which, often, no longer work.

Tirelessly, the loudspeakers announce the delays, from 12 to 24 hours. Then the peasant women with their colored scarfs, the exhausted children, and the resigned soldiers go to sleep amidst suitcases and badly tied packages. There is no place to sit down. Under the stairs, a copy of PRAVDA has been spread out: it serves as a mattress for the "babushki" (grandmothers) who are out of food.

Entire families have demarcated their cramped territory on the floor. Tours are organized to line up at the buffet, where supplies are depleted.

Restrooms have long since become inaccessible. It is a surprising sight, anachronistic images in an airport from where once in a while an airplane takes off, whose departure is watched without belief, silently. Because this forgotten crowd is silent.

Occasionally a man simply murmurs: "It is not normal." All the less normal as the same chaos is found at the other domestic airport at Vnukovo. The Soviet minister of civil aviation has referred to "the bad weather" to explain the situation. It is also pointed out that every year, at the end of the vacation period, the Soviet airports are overloaded, but never to this point.

So, Western observers have come up with different hypotheses. Delays, as systematic and as considerable as these, could be due to fuel supply problems. Certain Western military experts, on the other hand, have asserted that "Aeroflot" planes may have been requisitioned to transport Soviet soldiers involved in the important Warsaw Pact maneuvers in the German Democratic Republic in September. For several days now, these experts have been trying to understand what is going on at the Moscow domestic airports. But they acknowledge that they do not really understand it.

8463
CSO: 3100

RAILROAD

OFFICIALS TAKE PART IN RAILROAD WORKERS' DAY MEETING

Moscow GUDOK in Russian 1 Aug 80 pp 1,3

[Unattributed article: "By the Express Route of Creation"]

/Text/ There is a good tradition among those who labor on the steel main lines. While celebrating their occupational holiday--All-Union Railroad Workers' Day--they critically evaluate their own work in an interested and business-like way, and they outline ways to further improve it.

It is especially important to do this now: the conclusion of the five-year plan is drawing near, and it is a matter of honor for all the railroad workers not only to complete it successfully but also to prepare everything necessary for a confident start on the next plan as well as to celebrate in a worthy manner the 26th Congress of our own Communist Party.

This was the subject of people's thoughts as hundreds of workers from the capital's main lines, the Ministry of Railways and their guests assembled yesterday in the Central House of Culture of the Railroad Workers.

At 1730 hours the following took their places in the presidium: member of the Politburo of the CPSU Central Committee and secretary of the CPSU Central Committee, A. P. Kirilenko, member of the Politburo of the CPSU Central Committee and first deputy chairman of the USSR Council of Ministers, N. A. Tikhonov, chief of the Transport and Communications Department of the CPSU Central Committee, K. S. Simonov, deputy chairman of USSR Gosplan, V. Ye. Biryukov, the Minister of Heavy and Transport Machine building, V. F. Zhigalin, USSR Minister of Transport Construction, I. D. Sosnov, secretary of the CPSU Moscow Gorkom, L. A. Borisov, members of the collegium of the Ministry of Railways, members of the Presidium of the Central Committee of the Railroad Transport Workers' Union, representatives of the USSR's armed forces, party, soviet, trade-union and Komsomol organs, as well as outstanding production workers.

The grand meeting of workers of the Moscow Railroad Terminal, outstanding workers and production innovators, transport specialists and employees of the Ministry of Railways, devoted to the All-Union Railroad Workers' Day, was opened by the chairman of the trade union's Central Committee, N. I. Kovalev.

The Anthem of the Soviet Union sounded forth majestically.

A proposal was introduced to elect an honorary presidium for the grand meeting.

Locomotive engineer of the Depot imeni Il'ich, deputy to the USSR Supreme Soviet and Hero of Socialist Labor, S. E. Yatskov, ascended the rostrum and proposed the election of an honorary presidium of the meeting to consist of the Politburo of the CPSU Central Committee, headed by the general secretary of the CPSU Central Committee and chairman of the Presidium of the USSR Supreme Soviet, Comrade L. I. Brezhnev. The hall supported this proposal by stormy, prolonged applause.

The main report was presented by the USSR Minister of Railways, I. G. Pavlovskiy.

The minister stated that amid the circumstances of intensive labor and political activity, brought about by the decisions of the June Plenum of the CPSU Central Committee, the railroad workers were celebrating their occupational holiday. Together with all workers, we are going forward to celebrate a very important event in the lives of our Party and people--the 26th Congress of the Communist Party of the Soviet Union. The time is coming when, in Leonid Il'ich Brezhnev's model expression, the Soviet people will take one more step in the movement towards communism.

The decisions of the Plenum are understandable and close to all Soviet people; they are wholly and fully approved of by the railroad transport workers. Those who labor on the steel main lines solidly support the domestic and foreign policies of the communist party and the Soviet state, whose highest goal is the people's welfare. The correctness of the Communist party's course has been proved by life itself. The implementation of this course has allowed us to move significantly forward in developing the national economy, in further raising the material and cultural levels of people's lives and in strengthening our Motherland's defensive capabilities.

There is steady growth in the Soviet Union's international authority, and the positions of world socialism have become increasingly stronger. It has already been three and a half decades that that our country has lived and worked under peaceful conditions. The June Plenum of the CPSU Central Committee reaffirmed the correctness of the Leninist foreign-policy course, directed at the universal strengthening of the fraternal alliance among the socialist states, support of the just struggle of peoples for freedom and independence, for peaceful coexistence and restraint in the arms race, for the preservation and development of international detente and for mutually advantageous cooperation.

The railroad transport workers, like all Soviet people, fully approve the principled, peace-loving foreign policy of the Communist Party and the Soviet state, along with measures to protect and guarantee the security of our motherland. We are profoundly grateful to the Party's Central Committee, the Soviet government and personally to the general secretary of the CPSU Central Committee and chairman of the Presidium of the USSR Supreme Soviet, Comrade Leonid Il'ich Brezhnev, for their tireless work in implementing the Program of Peace. With all our hearts we wish Leonid Il'ich good health and great new successes in his exceptionally responsible and noble activity in the name of communism and a lasting peace.

The Tenth Five-Year Plan, continued Comrade Pavlovskiy, was for the railroad workers a five-year plan of new construction and stepped-up technical progress. Proceeding from the leading role played by the railroads in carrying out transport and economic ties in the national economy, the Communist Party and the Soviet government worked out an extensive program of development for our sector during the years 1976--1980.

During one year alone new lines with a total length of almost 700 kilometers were put into permanent operation. The length of electrified main lines was increased by more than 1,300 kilometers. They are now utilized to carry out almost 55 percent of the entire freight turnover. Another 3,400 kilometers have been equipped with automatic interlocking units and dispatcher centralization, and 5,800 switches were included within the electric centralization system. Construction of second tracks continued, while work was carried out on developing classification and freight yards, as well as mechanizing gravity yards.

Transport has acquired a considerable number of locomotives, freight and passenger cars, and containers. Fifty-four new terminal buildings have been put into operation. The passenger system has continued to be supplied with machinery, automatic ticket-vending machines, and reference-and-information equipment. There is a well-planned growth in the capacity for mechanized freight handling.

The high rate of development in the country's economy has been conditioned by a significant increase in the volume of hauls. During the first six months of the current year they have increased by 52 million tons. Railroad workers have fulfilled the plan for freight turnover. During the first four years of the 10th Five-Year Plan, as compared to the corresponding period of the 9th, freight turnover increased by 17 percent, while passenger turnover grew by more than 12 percent.

While increasing the rate of hauls, the railroad transport workers also manifest a concern for the qualitative aspect of operational activity. In comparison with last year we have succeeded in improving a number of basic technical-economic indicators of our work. Car turnover has been speeded up by 1.7 hours, and locomotive productivity has grown by 6,000 ton-kilometers(gross). The assigned task with regard to labor productivity has been fulfilled: it has grown by 2.6 percent. The production cost of hauling freight has been reduced.

The following groups were winners in the socialist competition for a worthy celebration of the All-Union Workers' Day: members of the Belorussian, Moscow, Odessa, Donets, North Caucasus, Central Asian, and Transbaykal Railroads, a number of divisions, the Moscow and Leningrad Subways, many stations and locomotive and car depots, along with enterprises in other sectors of the transport system.

With all my heart I wish to congratulate those who scored well in the socialist competition for their high production achievements and to wish all of you, dear comrades, new successes in your work for the welfare of our great motherland.

During the second quarter the plan for freight dispatching was over-fulfilled by groups from 18 railroads. The greatest increases herein were achieved on the Moldavian, Baltic, and Transbaykal Railroads. Among the industrial railroad transport associations the greatest successes were achieved by the Moscow, Ukrainian, Krasnodar and Krasnoyar Associations.

We note with great satisfaction that among the winners of the socialist competition in honor of All-Union Railroad Workers' Day is the group of the Moscow Order of Lenin Railroad. It is very important that after fulfilling the plan for freight dispatching, this group successfully coped with the tasks and socialist pledges with regard to stepping up car turnover, increasing locomotive productivity and freeing up the car pool for additional hauls. Now it is important to reinforce what has been achieved and to mobilize all the railroad workers of the capital's main line for a further upsurge in hauling operations and an improvement in the utilization of technical means.

Upon the initiative of the Party Gorkom we have solved a number of very important problems connected with improving the organization of freight operations in the capital terminal complex, as well as speeding up the shipment and receiving of freight to consignees.

In short, a great deal is being done to transform the Moscow Railroad Terminal Complex into a model one.

Now there has ensued the decisive stage in the struggle to fulfill the plan for the culminating year of the 10th Five-Year Plan. A few days ago the decree of the Party Central Committee was published, entitled "On Socialist Competition for a Worthy Celebration of the 26th CPSU Congress." The CPSU Central Committee has approved the initiative of the outstanding production workers and labor groups who have taken on shock duty in honor of the Party Congress. The CPSU Central Committee has called upon all Communists, Komsomol members and all workers to follow the example set by the initiators of the competition and to mark the Party Congress by high labor results. Herein we must proceed from Comrade L. I. Brezhnev's directive on the need to apply maximum energy in order to successfully fulfill and over-fulfill the plan for the concluding year of the 10th Five-Year Plan, as well as to assure persistent work during 1981--the first year of the 11th Five-Year Plan.

Guided by the tasks which our Party has assigned us, the groups at many railroads and transport enterprises have re-examined their own pledges for the current year and have undertaken new, increased ones.

The tasks of the railroad transport workers with regard to carrying out the decree of the CPSU Central Committee entitled "On Socialist Competition for a Worthy Celebration of the 26th CPSU Congress," said the minister, were discussed at a joint session of the collegium of the Ministry and the Central Committee of the Railroad Transport Workers' Union. It was resolved in all groups to work out and implement specific measures in order to celebrate the Party Congress in a worthy manner. In accordance with the decree of the CPSU Central Committee, during the course of the pre-Congress competition we must struggle as persistently as possible to increase production efficiency and work quality, speed up the growth of labor productivity, strictly observe a system of economizing and strengthen labor and state discipline.

The speaker stated that during the last few years many valuable innovations had appeared in the transport field. In the first place, he was talking about the experience of the transport workers of Leningrad, Chelyabinsk, Odessa, Lyublino, and Elektrostal', as well as about the initiative of the Moscow railroad workers with regard to increasing train weight. It is characteristic that the pledges undertaken by the railroad workers are becoming more and more economically well-grounded, thought out from every point of view, and directed at increasing efficiency and work quality. Much is being done to spread the experience of the leading workers, but, unfortunately, certain management supervisors and trade-union organizations still do not pay sufficient attention to the study, generalization and dissemination of progressive work methods, nor have they achieved a high degree of activity in the socialist competition.

Having rendered a great deal of aid to railroad transport, the Party Central Committee has required that the railroads be put in good order without delay. You know, Comrade Pavlovskiy went on to say, what sharp criticism the railroad workers were subjected to at the November 1979 Plenum of the CPSU Central Committee. Having examined the results of the national economy's development during the first six months of the current year, the USSR Council of Ministers noted that railroad transport is continuing to operate in an unsatisfactory manner. During the first six months the plan for freight hauls was not completely fulfilled with respect to volume nor for the entire products list. The worst performances with regard to freight were permitted on the Dnepr, South Urals, Kemerovo, Gor'kiy and Alma-Ata Railroads.

We are confronted with the task of assuring the increasing hauls of all kinds of freight without exception. Together with this, the most urgent and pressing need lies in fuel transport. Railroad workers successfully coped with the plan for coal and petroleum products hauls in July, but the rate of fuel hauls will increase. During the second six months coal alone will have to be hauled in amounts 20 million tons more than during the same period of last year. The railroad workers' duty is to mobilize all resources and all the possibilities to assure the fulfillment of plans for fuel hauls in order to create fuel reserves at electric power stations, as well as in industry and transport.

Increasing from day to day are hauls of grain and other agricultural produce of the new harvest. Taking part in the entire nation's struggle for bread, the railroad transport workers have been called upon to provide a model organization of transport services to agriculture. Together with the procurement agencies, we must arm ourselves with the experience of the groups of the Sal'sk and Mineralovodskiy Divisions, the railroad workers of the Tselinna Main Line, and the procurement organizations of the Kuban', the Don, and Stavropol'.

It is very important to assure close and mutual cooperation with the groups from other modes of transport. Here it is necessary to utilize more effectively the aid of local Party and Soviet organs, as well as to develop socialist competitions with workers in closely related fields. We must arrange matters so that a concern for cars and for maintaining rolling stock and freight becomes the common concern of railroad workers and those who use transport services.

While increasing the rate of hauls, railroad workers are also called upon to manifest more concern for improving the maintenance and repair of technical equipment. First of all, it is a matter of improving the operational reliability of the fixed capital assets of railroad transport--the locomotives, cars, track apparatus, automatic and telemechanical units.

A very important sphere of the railroad workers' activity is the organization of passenger hauls. We are investing large-scale funds in the development of the passenger system, and we are striving to expand services to passengers. A great deal of organizational and training work among the groups at stations, terminals, and reserves of conductors was carried out during the period of preparing for the Olympic Games. Now it is important to reinforce what has been achieved and to disseminate more extensively the great amount of experience which has been accumulated in organizing such mass hauls. Top-priority attention must be paid to the strict observance of the passenger-train traffic schedule.

The speaker dwelt further on the need to improve the style and methods of administrative work. To wage a decisive struggle for an extremely strict observance of state, planning, and labor discipline, to establish operative controls and check-ups on the implementation of the party's and the government's directives, the orders and directives of the Ministry and the administration's own decisions.

Unfortunately, on the railroads and at the enterprises quite a bit of time is still being lost because of unauthorized absences, stoppages, and non-appearance at work with the administration's permission. Therefore, economic managers and trade-union committees need to increase their requirements on personnel for observing labor discipline, and to always be in the advance positions of the labor offensive.

The Communist party and the Soviet government have manifested enormous concern for the improvement of the working conditions and everyday lives of railroad workers, as well as for the strengthening of personnel staffs. You well know what measures have been adopted in this area. I only wish to state that the total sum of funds which has been allocated from the state budget for improving the welfare of railroad workers amounts on an annual accounting basis to approximately 390 million rubles.

The wages of the workers employed on hauls have increased during the last six months alone by 10 percent, while on the railroads of Siberia and the Far East they have gone up by 20--30 percent. Every year about 70 million rubles are spent on improving the working conditions of the railroad workers.

A great event for all the transport labor groups was the decree of the CPSU Central Committee "On Measures to Improve Party and Political Work in the Field of Railroad Transport." All the employees on the steel main lines have accepted this decree as a new and vivid testimony to the enormous concern of the Communist party, its Central Committee, the Politburo of the Central Committee, and personally of Comrade L. I. Brezhnev for railroad transport and its workers.

The party influence on the operation of railroad transport is great and will become even more significant. Such is the decision of the Party Central Committee. For their part, the railroad transport workers at all levels of supervision must assure the organic link between economic and training work, develop within themselves a lofty consciousness of responsibility to the state, as well as a creative attitude towards carrying out the duties of their positions.

The railroad workers are deeply grateful to the Party Central Committee, the Soviet government, and personally to Comrade L. I. Brezhnev for their great concern regarding transport and its workers. In response to this concern, carefully preserving and multiplying its own best traditions, the railroad transport workers are directing all their efforts and all their energies at an upsurge in transport operations.

On behalf of the Collegium of the Ministry of Railways and the Presidium of the Central Committee of the Union of the Railroad Transport Workers, said the minister in conclusion, let me heartily congratulate you, your families, and all the workers on the steel main lines on the occasion of the All-Union Railroad Workers' Day, and let me wish you good health, happiness, and great successes in your work! Allow me in your name to assure the CPSU Central Committee, the Soviet government, and personally the General Secretary of the CPSU Central Committee and Chairman of the Presidium of the USSR Supreme Soviet, Comrade L. I. Brezhnev that we will apply all our efforts, skills, and experience to successfully solving the complex and crucial tasks which our Leninist Party has set before the railroad workers.

The report was concluded. The participants in this meeting unanimously and with thunderous applause adopted the letter of greetings to the CPSU Central Committee, the Presidium of the USSR Supreme Soviet, the USSR Council of Ministers, and to the General Secretary of the CPSU Central Committee and Chairman of the Presidium of the USSR Supreme Soviet, Comrade Leonid Il'ich Brezhnev.

The text of the letter was read aloud from the rostrum of the grand meeting by the Secretary of the Party Committee of the Moscow Railroad Administration, V. I. Morzinov.

N. I. Kovalev, who chaired the meeting, declared that in connection with All-Union Railroad Workers' Day greetings had been received from many party, Soviet, and economic organs, from a number of Union and republic-level ministries, as well as from railroad transport enterprise groups and foreign railroads.

In the name of those assembled at the meeting Comrade Kovalev expressed acknowledgment and gratitude to all organizations, comrades and foreign friends for their greetings and congratulations in connection with the traditional holiday of the railroad transport workers.

The grand meeting was declared adjourned.

After the grand meeting a festive concert was presented.

2384
CSO: 1829

IDLE CARS, OTHER BELORUSSIAN RAILROAD PROBLEMS DISCUSSED

Minsk PROMYSHLENNOST' BELORUSSII in Russian No 7, 1980 pp 26-29

[Interview between Ivan Nikolayevich Gurkov, head of the Department of Sidings, Belorussian Railroad, and Magazine Correspondent F. Velikoselets: "The Algebra of Interrelationships"]

[Text] One frequently hears something like the following at one enterprise or another: "The realization plan has been disrupted by fault of a railroad which did not deliver the cars." As a rule, the railroad workers answer such accusations thus: "But the enterprises themselves are guilty of this because they constantly delay cars being loaded and unloaded." This quarrel is first of all evidence of the disjointed efforts by both sides to resolve the transport problem. Moreover, relationships between the railroad and industrial enterprises should not be built on mutual claims but on mutual assistance.

Our correspondent F. Velikoselets talks with Ivan Nikolayevich Gurkov, head of the Department of Sidings, Belorussian Railroad, about the questions which have been raised.

Velikoselets: Ivan Nikolayevich, a few words first about the material foundation of relationships, that is, to what extent are industrial enterprise personnel participating in the railroad industry, in the transport process?

Gurkov: In our republic, two-thirds of the loading and unloading operations associated with rolling stock are performed on industrial sidings. It is not difficult to imagine the effect they exert on the working rhythm of the steel highway and other organizations.

As far as sidings go, half of them are at present on the railroad's balance sheet while the other half belongs to the enterprises. The tendency is that in time all newly constructed track, with rare exception, will belong the the railroad.

Many enterprises, particularly large ones, have their own locomotives and repair centers and a significant number of their own cars. Naturally, their facilities should work with us in precise rhythm and in close contact. To this end, both sides are concluding appropriate agreements in which conditions insuring uninterrupted operation of the transport conveyor are concretely agreed upon.

Velikoselets: One of the main conditions for accelerating car turnaround is the development of freight depots oversupplied with equipment. These questions, as was noted at the 20th Plenum of the Communist Party of Belorussia's Central Committee, require the most serious attention. Meanwhile, capital investments allocated by enterprises for the development of railroad siding services is not being fully utilized from year to year and increasing the standardized construction deadlines is being permitted. Does this not indicate a misunderstanding of the problem's importance on the part of certain economists?

Gurkov: Apparently, one cannot view this any other way. In practice, one observes such facts as the start-up of new plants or additional facilities with incomplete work on transportation. Even the construction ministries and departments do not perform planned measures for the development of their own transport service.

Enterprises of the Belorussian SSR Ministry of Procurement overlook these questions more frequently than others. There has been almost no expansion of freight depots here in recent times. The loading lines are outfitted with equipment having various levels of productivity. Many enterprises are not even equipped to receive grain from special grain cars.

Such a large enterprise as the Minsk Motor Vehicle Plant is also developing its loading depots poorly. Sometime back, they built a single loading platform here and were content with that although production volume has grown immeasurably since then.

The status of siding services at the Krichevskiy cement and slate and the Bobruyskiy tire combines and at certain points belonging to the republic association "Vtorchermet" cannot be considered satisfactory. And of course this results in car idle time exceeding the norms, with the enterprises being at fault.

Velikoselets: What are the losses to the rail car fleet in the republic because of this?

Gurkov: Last year 81,786 cars were lost because of idle time exceeding the norm. In the first quarter of this year it was 16,161 cars. Of course, the loss of such a large amount of rolling stock would paralyze many enterprises. The pace-setters help them out. They covered this shortage to a considerable extent by their economy. Therefore, in 1979, rail car idle time was reduced somewhat on the whole. This is also the result of introducing the experience of the Chelyabintsy. It is true that the norm was nevertheless exceeded by 9 minutes. But this year car idle time on enterprise sidings was reduced by 4 minutes as compared with the norm for the first time on the Belorussian railroad, based on the totals for (the first) four months. This resulted in a savings of more than 40,000 cars. At the same time, more than 40 percent of the enterprises are not meeting the norms which they set for idle time.

Velikoselets: As is known, norms for car idle time are calculated on the basis of available freight depots and equipment. Could it not occur that an enterprise which is lagging behind in this regard could receive a higher norm, meet it and be considered an advanced enterprise?

Gurkov: Hardly advanced. But the fact that it will not attract public attention is well established. Such examples are common in practice. Here is one of them. Until this year, the republic's Ministry of the Meat and Dairy Industry constantly could not meet quotas for car idle time on sidings on the whole. This year it satisfied the norms. But it did not merit applause from railroad workers. Judge for yourself. Throughout all of the ministries and departments norms for car idle time are set at 2-3 or, under duress, 4 hours. Here it is more than 7 hours. As a rule sections of 5 and sometimes 10 cars are brought to the meat packing plant. Inasmuch as meat is loaded through just one door, it is not difficult to imagine how many hours are required to load the last car. Moreover, certain persons at the Belorussian SSR Ministry of the Meat and Dairy Industry are trying to place the blame on the planners, who, they say, assigned them such plans. Now nothing can be done about it.

It is also apparent from this example how persons in the industry are relating to the problem of reducing car idle time. At one time meat was simultaneously loaded into two cars at the Pinskiy meat packing plant. However, the enterprise exerted considerable effort to organize unloading through just one door. As a result, the norm for idle time jumped to 10 hours. In fact, the idle time for each car is 11.46 hours here.

It must be said in fairness that they have undertaken to resolve the problem at the Belorussian SSR Ministry of the Meat and Dairy Industry. In the future, car idle time should be reduced. Meanwhile, the overwhelming majority of the meat-processing enterprises in the republic are operating with enormous norms for car idle time. Moreover, there is a truly valuable experience in the organization of loading-unloading operations on sidings. The address for this experience is the Orshanskiy meat canning combine. They approached the matter creatively here. When, for example, they decided to employ unloading equipment on a broad scale, it became clear that the situation which had developed would not permit it. They renovated the plant, strengthened the floor, doubled the width of the freight depot and incorporated movement of cargo in stacks. As a result, not only the loading and unloading of meat, but also other cargoes (salt, etc.) was mechanized.

Today the role of the transport shop has been brought up to that of basic production at the Orshanskiy meat-processing plant on the basis of its significance. Here 24-hour dispatcher duty has been introduced with the right having been given to a dispatcher to take people from other sectors when there are difficulties with loading and unloading operations. Two schedules are constantly being monitored by plant management: the course of production and car processing. The final result is as follows. Cars being processed are here not 7 hours as at the other plants, but only 2.6 hours!

The experience of the Orshantsy merits constant attention. It is paradoxical that here in Orsha there is yet another enterprise of the Ministry of the Meat and Dairy Industry, a dairy plant. There cars stand idle more than 9 hours during cargo operations.

Velikoselets: In your view, what would it be necessary to undertake for perfecting the economic mechanism to improve the operation of the transport conveyor?

Gurkov: First of all, I would like to direct your attention to an instance such as this one. In our republic there is a large number of so-called little-used sidings with a freight turnaround of as little as two cars per day. There are, for example, more than 430 such sidings which are subordinate just to republic ministries and departments. On 290 of these sidings, one car or less is processed per day. In a word, this siding service is inactive for practical purposes.

Given such, if you will permit me to say, intensity of car processing, the administration of the enterprises is naturally not interested in investing funds for development of the sidings and maintaining them in an established regimen. It is understandable that here expenses are not justified. But in the final analysis, this shows up negatively on accelerating car turnover and insuring the state transportation plan.

There is one way out of the situation--cooperation, the construction of common tracks with the corresponding service. Of course it is complicated to realize this in practice, for the sidings belong to various owners. But such a measure would have an effect.

Unloading cement is a critical question. Hundreds of enterprises within the republic receive it, and, as a rule, in small quantities. Naturally it is unloaded where and however it may be accomplished. For example, at the Tsentrolit and Gomel' stations, more than 20 enterprises receive cement. It is unloaded in a semi-primitive manner. No one thinks of installing the appropriate equipment, and so the cement cars stand idle for days. Moreover, when they are unloaded, great quantities of the raw material are permitted to be lost, and locomotives are taken from service for long periods of time to distribute the cars to the various points (in Orsha, for example, cement is unloaded on 31 of the 35 existing sidings).

All of this may be avoided if common, mechanized cement unloading sites are established (the car is freed after half an hour in all!). That means half as many cement cars will be required. And the enterprises will be supplied more fully. Experience in this type of unloading organization has been acquired at the Minsk-Freight station. Now cement comes here in unit trains and is unloaded 5 times more quickly than before. Costs, losses and production costs have been reduced.

There is yet another instance concerning the perfection of the economic mechanism, the creation of an industrial rail transport association in the republic. It consists of three enterprises from the Minsk heating equipment plant, the Belorussian tire combine and the Svetlogorskaya TET's. They will take the railroad sidings over onto their balance sheet and will answer for their development, for the mechanizing equipment and the timely and high-quality service to their clients. The industrial rail transport enterprises will be subordinate to the central board of the USSR Ministry of Transportation.

Velikoselets: However, let us return to the interrelationships between the railroad workers and the industrial enterprises, and, more specifically, to the question of their collaboration. As has already been noted, it is developing successfully at the Minsk-Freight station in recent years. Can you not tell us about this in more detail?

Gurkov: The Minsk-Freight station serves 12 enterprises, including such as a railroad car repair plant, a silicate products combine, a meat packing plant and others. They have had no claims toward one another in recent years. This is the result of the combined efforts of all sides to improve the organization of operations.

The enterprise and the station's personnel created unified shifts and developed conditions for a competition in which helping each other was set up as the most important task. The optimum variant for the sequence in which the sidings are processed was worked out. Now the delivery of cars proceeds according to a strictly established regimen, and it is not dependent on anyone's personal wishes. This represents a great disciplining beginning. Teletype communications have been established with the clients. Now each of them has reliable information about arriving freight and the number of cars involved at its disposition. These data are transmitted to the enterprises 12 hours in advance, permitting them to prepare for any volume of work. As a result, car idle time has been reduced significantly and the static load has been increased. For example, last year more than 7,500 cars were saved because of this last factor.

The collaboration of transport workers and industrial workers is also being strengthened at the Stepyanka station. The experience of the Chelyabintsy is being widely used there. The station's personnel help enterprises to select cars in the requisite order, accelerating their processing. In turn, the plants strive to dispatch their cargoes in unit trains.

Velikoselets: By the way, how are things with unit train shipments? Everything depends primarily on the enterprises in this case.

Gurkov: Indeed, the marshalling of unit trains is in the hands of enterprise marketing divisions. If they plan the dispatching of freight by direction, grouping them on the basis of the orders on hand, the question will not come up. Unfortunately, production workers frequently dispatch cargo in 10 different directions during a single day. There is less trouble, less work for them this way. In my opinion, a system to stimulate workers of the marketing divisions to dispatch the produce in unit trains must be thought up.

As concerns the level of unit train shipments, it was brought up to 54.9 percent in the first quarter of this year. This is on the average. It was 93.7 percent for cargoes of petroleum products and 88.1 percent for fertilizers.

Today most enterprises understand the importance, the profitability of unit train shipments, and they strive to this end. But there are also facts to the contrary. Let us take that same Belorussian tire combine. More than enough cars for a unit train are dispatched annually from its sidings. However, unit trains are not marshalled. The plant's administration declines such troubles for some reason.

Velikoselets: Railroad workers frequently make inspection reweighings of the cargo in cars. What are they talking about?

Gurkov: Unfortunately, a significant number of cars are still passing underloaded, and that is when there are not enough of them. The Kirchevskiy cement and slate combine, the Petrikovskiy claydite gravel plant and other enterprises of the construction materials industry underload rolling stock particularly often. In January, for example, when a car with Kirchevskiy cement was reweighed at the Slonim station, it was short more than 8 tons. A repeated reweighing was made in March; then the car was short 11.8 tons.

Last year railroad workers reweighed 21,600 cars dispatched by enterprises of the republic's Ministry of the Construction Materials Industry. There were 4,752 of them which were underloaded.

COPYRIGHT: "Promyshlennost' Belorussii," No 7, 1980

9194
CSO: 1829

OCEAN AND RIVER

REVIEW OF MARITIME FLEET'S PLAN FULFILLMENT

Moscow MORSKOY FLOT in Russian No 8, 1980 pp 1-4

[Article by V. Nikolaychuk, deputy minister of the Maritime Fleet USSR: "Reserves of the Maritime Fleet"]

[Text] The first 6 months of the final year of the 10th Five-Year Plan have come to a close. Now being summed up within production collectives are the results of work done during these 6 months. Progress in the course of fulfillment of plan assignments for the year and for the 5-year plan as a whole is being determined, the results are being analyzed, and production reserves are being brought to light. All of this is particularly important, inasmuch as our industry stands on the threshold of a new 5-year plan.

Within our associations (gkho) and steamship lines, at ports and other enterprises of the Ministry of the Maritime Fleet, people have already embarked upon the work of planning assignments for the 11th Five-Year Plan.

Every 5-year plan is a great step forward in the expansion of our branch of industry. These 5-year plans lay down problem tasks, designate limits, and determine material resources. From that point on, fulfillment of the assignments stipulated by the plan depends on the level of economic leadership and the organization of production, the depth to which measures have been worked out, measures necessary to resolve the tasks posed, the effective utilization of basic funds and material and labor resources which have been allocated, the formulation of economic and financial work at enterprises, plus the ability to seek out reserves and to draw them into production.

In working out the 10th Five-Year Plan for the expansion of maritime transport in all of its links (for the transport of cargo and passengers, fleet design and construction, the expansion of ports, ship repair yards and other maritime transport enterprises), what we sought to provide for was the fullest possible satisfaction of the needs of our national economy and foreign trade as to hauling of cargo and passengers, an improvement in the work quality of maritime transport, and the securing of independence for Soviet foreign trade from foreign shipowners. It was necessary also to accelerate delivery of cargo to consumers and to strive for more reliable transport links between the nation's economic regions with a minimum of transport delays.

Results of the work of the Ministry of the Maritime Fleet over the 4 years of the 10th Five-Year Plan demonstrate that, basically, the 5-year plan for the expansion of our industry is being fulfilled. Freight turnover in the hauling of cargo in coastal navigation increased by 10.5 percent while financial results from the operation of the fleet overseas increased by 27.2 percent. The volume of port loading-unloading operations increased by 8.4 percent, while profits from our basic operational activity grew by 19.8 percent and the manufacture of products by our ship repair yards increased by 26.9 percent.

A great deal of purposeful work was done towards increasing the effective utilization of basic transport funds and of reducing the disproportion in the expansion of the fleet's transport capabilities and of port traffic capacity. All this was achieved thanks to the construction of new ports and freight transfer complexes, the reconstruction and expansion of existing facilities plus the replacement of outmoded equipment, through supplying ports with more productive reloading equipment, and by increasing the level of complex mechanization and the introduction of advanced technology to loading-unloading operations.

Being added to our transport fleet are modern and highly-productive container carriers, "roll on" vessels, transport barge haulers, ferry boats, specialized vessels for hauling bulk cargo, timber haulers for the transport of packaged timber products, large tonnage vessels for the hauling of compressed gas, ships with reinforced bows for the transport of cargo to ports and points located in the nation's Arctic regions. There was a 21.7 percent increase in the fleet's deadweight tonnage.

Over the 4 years of the 10th Five-Year Plan, maritime transport basic production funds increased by 37.4 percent and, as of 1 January 1980, consisted of 14 billion rubles and more. This was not simply a quantitative increase in fleet and port basic funds nor was it simply new transport vessels and port structures created for the hauling and transshipment of increased cargo volumes. These were qualitatively more improved means of transport, very expensive ones created for the resolution of more complex tasks and calculated to meet higher requirements and planned for more intensive usage. Evaluation of the effectiveness of this utilization of more traditional methods might prove insufficient, inasmuch as the effect from the operation of means of transport can be realized in other fields or in the transport of contiguous types.

For example, the problem of year-round navigation at the port of Dudinka was fully resolved during the 10th Five-Year Plan. In order to facilitate navigation in this direction during the winter period what was necessary was the concentration of several powerful, modern nuclear icebreakers and transport vessels with reinforced bows for use in Arctic ice. Such a concentration of icebreakers and transport vessels for the hauling of a relatively small volume of cargo leads to increased expenditures for each ton hauled. There was an economic effect derived from this, however, inasmuch as enterprises of the Noril'sk Mining and Metallurgical Combine no longer need maintain large reserves of valuable products. Also, there was the benefit to be derived from the fact that the combine's production is being hauled out and sold without the interruption of the between-navigation period.

In this manner, increased expenditures in the field of maritime transport allow us to derive an economic effect which is many times larger at enterprises of the Ministry of Nonferrous Metallurgy.

National economic needs dictate the tasks which enterprises of our industrial branch must resolve. Necessary specialized transport facilities are being created. The level of improvement and the quality of these transport facilities determines the form of administration and the planning, analysis and evaluation of the results.

In working out plan assignments for the 11th Five-Year Plan, it is necessary to evaluate in detail, taking into consideration our industry's working conditions, the level of production development, and the degree of technical coordination between the fleet and ports as to the tasks posed. Also it is necessary to analyze the results, to uncover reserves, and to determine the method for their utilization.

Note must be made of the fact that at enterprises of the Ministry of the Maritime Fleet there are still a significant amount of internal reserves which it is possible to mobilize in order to make a substantial improvement in qualitative indicators. A complex approach to the resolution of tasks plus the tying together into one system of all elements, both of a technical as well as of an economic nature, will facilitate achievement of high production results. It is one of the most important methods for increasing the effectiveness of production and the quality of work.

Large reserves are available to us by raising the level of operations and by using the basic funds of the transport fleet and ports. Maritime transport enterprises have at their disposal significant sums of basic funds and floating capital, as represented by various types of equipment, ships, hydrotechnical structures, loading machinery, material production reserves, fuel and many others.

What has the greatest influence upon indicators as to the effective utilization of maritime transport basic funds are such factors as the level of fleet operations (particularly that of the specialized fleet), the intensity and smoothness of port operation (particularly the work of loading-unloading complexes), plus the degree and speed with which new productive capacity is handled.

The linear form is the most progressive and effective form for fleet operations and the organization of cargo hauling. It facilitates the smooth movement of vessels, creates the favorable conditions necessary for their handling at specially designated piers, allows the accumulation of cargo well ahead of time, and increases the loading of vessels.

However, much improvement still needs to be made in our expansion of the linear form of fleet operations. Thus, in 1979, only 35 percent of our dry-cargo fleet operated on line. Schedules for the movement of vessels were disrupted, not enough measures were taken to increase the loads they were carrying in either direction, and there were delays in the handling of line vessels in port.

In organizing on line cargo hauling, steamship lines and associations (gkho) were guilty, in a number of cases, of failing to properly organize particular operations. The result was the emergence of lines which were not highly effective.

In maritime transport much attention is being devoted to the expansion of the system of shipping cargo in containers and in packets. This is regarded as one of the basic trends in the improvement of the transport process. However, even in this field, there is much that is being neglected. On their return journey, vessels are not always given the opportunity to take on a containerized cargo. As a result, a great number of empty containers are being hauled. Control over the movement of containers is unsatisfactory: because of this, circulation of these containers takes longer than is economically justified while schedules for movement of containers are being violated.

Insufficient use is being made of the specialized fleet in cargo hauling. In the operational time budget, the relative proportion of layovers for specialized vessels of certain types fluctuates from 30-35 percent (for "roll on" vessels and container ships), and from 46-48 percent (for bulk carriers). Such specialized ships were intended for more intensive utilization; their design features allow us to reduce their layover time to 15-20 percent of their operational time. However, the advantages of these specialized vessels are far from being utilized fully.

Elimination of shortcomings plus the achievement of an even higher level of fleet operation due to the improved organization of ship movement and handling in port--this is an essential reserve in improving our industry's economic indicators. Considerable reserves are also available by increasing production effectiveness with optimal planning and management.

The use in production of working capital and production on a large scale of highly productive and costly basic funds which have been invested in modern techniques and equipment requires more improved methods of planning and management on all levels of production plus an improvement in planning and finance work. It also calls for the need: to strengthen economic methods in directing our economic activity;, to increase the effect of economic indicators upon end results; to conduct a profound economic analysis; and, to increase our role in backing decisions adopted with economic calculations and a proper economic foundation.

A basic trend in improving the planning and administration of fleet transport enterprises means the further expansion of planning on the basis of an uninterrupted plan-schedule for the work of the transport link. Such work represents coordinated activity in transport of contiguous types within the bounds of transport links on the basis of scientifically based standards. It is a better method for the cortemporary management of the cargo hauling, one which permits us to achieve a more effective utilization of the material and labor resources of all of its participants in satisfying the requirements of the national economy for cargo hauling with a minimum of expenditures.

In ports of the Ministry of the Maritime Fleet a great deal of attention is being devoted to improving the work of transport links, to introducing a system of uninterrupted planning, and to closer interaction between transport ministries.

At the present time 36 transport links at our maritime ports carry out their work on the basis of uninterrupted plans-schedules. At ports where this work is well organized, the average time for handling vessels has been reduced 5-7 percent, while the average time for the handling of freight cars has been cut back 7-12 percent. These are essential reserves for improving the effectiveness of utilizing transport facilities.

Shortcomings still exist, by the way, in the coordinated activity of contiguous type transport within the bounds of transport links. Information on the approach of vessels is tardy in coming in, the problem of supplying ports with freight cars has not been fully resolved, there is not the necessary tie-in between the work of fleets and ports, schedules for providing vessels for the export of cargo are being violated, while port requests for freight cars on which to haul out imported cargo are not being fully satisfied. Elimination of these shortcomings will allow us to better utilize possibilities for coordinated work between transport of various types within the bounds of the transport link and will increase the effectiveness of the exploitation of transport means.

Within the Ministry of the Maritime Fleet, a great deal is being done for the expansion of shore-based facilities. There have been placed into operation specialized complexes for the transshipment of multi-ton containers in the ports of Leningrad, Il'ichevsk, Vostochnyy, Petropavlovsk-Kamchatka, and others. Piers have been rebuilt in the ports of Nakhodka, Riga, Zhdanov, Tallinn, Novorossiysk, and others.

Placement into operation of the latest and newest means of mechanization, expansion of the hauling and transshipment of cargoes in containers and packets has permitted us to increase the productivity of technological lines by 50-60 percent and to cut back on the use of hand labor in loading-unloading operations.

Along with this, possibilities for an increase in labor productivity and a subsequent increase in its effectiveness are not being taken advantage of fully by our ports. There are shortcomings in the organization of production and labor while instances of workers standing idle have been observed; in 1979, these cost our ports about 90,000 workdays in time lost. This idle time (55,000 workdays) was greatest in the "Southern Fleet" Association (gkho).

It is necessary to eliminate these shortcomings; by adopting radical measures for facilitating smoothness of operations, for increasing production engineering preparations, for improving and disseminating collective forms for the organization and payment of labor; by strengthening labor discipline; and, as a consequence of this, by accelerating an increase in the productivity of labor.

An important role in improving the effectiveness of production, side by side with perfecting of planning and strengthening of economic stimulus in production, is played by the correct organization and effective use of working capital.

The presence of above-norm reserves of value (these consisting of goods and materials) in inordinate large measure, plus the debiting of in-house funds, acts as a damper upon the circulation of working capital. It requires the bringing in or additional bank credit and leads to additional expenditures, all of which lead to a decrease in production profitability and effectiveness.

In 1979, there was a considerable increase in above-norm production reserves. As of 1 January 1980 at enterprises of the ministry, these exceeded 320 million rubles, including 42.2 million rubles in uncredited reserves. Such reserves are hardly justified.

For these reserves of material value enterprises of the Ministry of the Maritime Fleet take on bank credit. Credit costs money. Every year, the ministry pays 12 to 15 million rubles in interest for bank credit. Where is the supervision which is needed here, are such reserves necessary, and is there any economic basis for all of this? The existence of such reserves has a direct influence upon the profitability of production. This also constitutes a reserve when it comes to increasing the effectiveness of production, and it is a significant reserve.

In 1976 the Ministry of the Maritime Fleet issued an order which set a task for drawing these material reserves into circulation and for accelerating the turnover in the working held by enterprises of the ministry for the period 1976-1980. However, this decree is not being fulfilled satisfactorily. The task called for 36 million rubles worth of material resources to be placed back into circulation; over the 4 years of the 10th Five-Year Plan, only 24 million rubles have been realized out of 36 million which were set as the goal. The Northern, Murmansk, Black Sea and Caspian steamship lines are in the worst situations in regard to this.

Quite a bit of the in-house funds possessed by associations (gkho), steamship lines and other enterprises of the Ministry of the Maritime Fleet have been debited. As of 1 January 1980, the amount of that indebtedness was about 57 million rubles. Indebtedness of foreign firms, thus involving failure to pay bills on schedule, is evoking particular anxiety.

Improvement of the calculation system, increased supervision over the payment of charter fees on schedule, plus a decrease in indebtedness will reduce the need for credit and will, as a consequence, decrease the amount of interest which has to be paid.

Real control has yet to be organized by associations (gkho), steamship lines and other enterprises of the ministry over the economic expenditure of funds. As a consequence, a considerable degree of nonproductive expenditures and losses is being allowed. For the year 1979, these losses amounted to 37.9 million rubles. Basically, these are fines for demurrage, losses from unprotected cargo hauling and transshipment, plus expenditures for the writing off of the consequences of accidents. Reduction of this type of expenditure is a considerable reserve as to increasing profits and profitability.

Results of the work of our industrial branch are judged by our fulfillment of plan assignments, the level of effectiveness of our use of basic funds and working capital, and by our fulfillment of other economic indicators. The future development of our industry requires an increased level of economic leadership, the improvement of planning, plus an improvement in planning and finance discipline. Without this, the effective use of these considerable sums contained in basic funds and working capital now in the possession of enterprises of the Ministry of the Maritime Fleet is impossible.

In noting the measures which we must take for the successful completion of plans for the year 1980, we must keep in mind the fact that 1980 is not only the closing year of the present 5-year plan but that it is the base on which the following 5-year plan is to be built.

In working out the assignments for the 11th Five-Year Plan, it is necessary for us to make a deep analysis of the results as to every type of our activity, to bring shortcomings to light, to designate measures for their elimination, and to mobilize all of our reserves.

COPYRIGHT: "Morskoy Flot," 1980

9643
CSO: 1829

OCEAN AND RIVER

PROBLEMS IN SHIP REPAIR SERVICES CITED

Moscow VODNYY TRANSPORT in Russian 16 Sep 80 p 2

[Article by Special Correspondent A. Petrov entitled: "The Horizons of Technical Service "]

[Text] Where To Repair the Ladder?

For the past four years the motorship "Sretensk" has gone without a shipyard overhaul. If its 21-year age is taken into account, it is obvious how difficult it is for the seamen to assure its proper technical condition. It is true that a repair team from the maintenance base of the fleet (BTOF) went to sea with the ship,but the specialists were unable to accomplish all the work because necessary materials were missing.

"Sretensk" in the past year visited its home port four times and remained there 71 days altogether. Each time, requests went in for the BTOF to repair the accomodation ladder and deck ladders, to manufacture aluminum gangways, and to replace the cargo winch housings. In these same requests, beginning in July of the past year, orders were repeated for the replacement of the bar ladders for the tambuchin [companionways ?] and the hoops secured to the cargo booms, and for repair of guard railings. These same items wandered from request to request, and new ones were added to them, but ---.

"Owing to a lack of manpower, the base has declined a majority of the requests". Most often one can hear precisely this sentence in the complaints of the seamen. The chief of the shipping service of BMP [the Baltic Maritime Shipping Company] A. Akul'shin confirmed this. In answering the grievances of the crew of "Sretensk", he reported: "Out of the great volume of repair work, personnel of BTOF have carried out top-priority work in the amount of 6,400 rubles. Of course, it is desirable that the crew's requests should be carried out completely in the shortest time. But, at present, at the shipyards and maintenance bases of the fleet there is insufficient manpower to maintain the whole fleet effectively and fully satisfy all requests of the seamen."

Thus, it seems very clear that there is a shortage of working hands. But, at a recent meeting of the council of shipping companies, where the question of the technical condition of the transport fleet and measures for improving it were discussed, it was noted that analysis of the use of BTOF workers showed that only a third of them are occupied in fleet maintenance. That tears it! What are the others doing?

About the Repairers

"There are not enough of our people on the ships" I. Kalinchuk, chief of the BTOF of BMP, at once agreed. "Basically we carry out the requests of the laboratory of automatic machines and of the electrical department, but actually, we do not do piping and hull work and, only rarely, mechanical work. It is true that recently, on one ship, we replaced about 1000 meters of piping but, you see, this is really shipyard work. The capacity of the base is clearly insufficient."

Today , the fleet maintenance base of the Baltic Shipping Company is the largest such enterprise in the industry with a staff of 900 persons. Yet, not so long ago, half as many people were employed here, and the base was a few small shops. In recent years the production resources have been substantially changed. New sections have been created: a hull section, a section for repairing the loading equipment of specialized ships, a wood-working section, and a section for the repair of fuel apparatus. The areas for carrying out the labor-intensive operations of oshkryabki [scraping?], cleaning, and painting of ships' hulls were expanded. A new pier for preparing ships for capital repairs was constructed. In a word, there are changes and not small ones. But now it is time to mention the fact that part of the troubles causing unfavorable criticism of the BTOF depends directly on the "sicknesses" of the ship repair plants,in their insufficient output,and in connection with what part of their responsibilities are being transferred to the base. Thereby the effort to convert the base into an unusual stand-by for a ship repair plant comes about.

Judge for yourselves. Just now there is an extraordinary growth in the inventory of containers. Accordingly, a necessity for their repair developed, the cost of which,by the way, has a tendency to increase. On one hand, a way out of this troublesome situation was to charge the specialists of BTOF with the repair of containers. On the other hand, this could not call for diversions of forces from the primary business - the maintenance of the fleet. But in some way or other, about 2600 containers and 400 trailers are being repaired at the base. I reiterate, no one disputes that this is very necessary and important, but -.

There is more. Part of the workers are being diverted into construction for the development of an in-house base kept at shore enterprises for the maintenance of the fleet of other departments.

"[illegible] now, only 500 men work directly on the ships of the transport fleet" says I. Kalinchuk."And here are data from a study: according to calculations of the TsNII [Central Scientific Research Institute] of the Maritime Fleet, in this year we must finish 1,246 man-hours of work on ships. It appears that we ought to have about 750 workers for the maintenance of the ships of the BMP! Today, this is an impractical number. But does this mean that there is no way out of the difficulty?

Facing the Fleet

The reason for the existence of the BTOF is, first of all, the carrying out of planned, normal maintenance work to prevent breakdowns of any ships' machinery. More often in practice, all repairers have to do work connected with outages of ships' equipment, or with the rectification of damages resulting from accidents. This explains the sinusoidal nature of the graph of staff work - - sometimes all hands are at work, sometimes it is slack.

To eliminate this disharmony , the new system of planning the work of the base was worked out. The production activity of the sections is specialized in three directions: planned repair, zero cycle repair and urgent repair.

V. Temnikov, deputy chief of the base, finds here an analogy with medical assistance to people: the polyclinic - this is like repair; the sanatorium - this is like planned maintenance; and emergency aid - this is obvious. Such a structure permits the staff of the base and of the shipping services to make up specialized teams directly turned toward the fleet. But, though this structure was approved and recommended for use at the beginning of the past year at a meeting of the scientific and technical council of the shipping company, its realization has been unjustifiably delayed.

"We think" says V. Temnikov "that the whole difficulty is in the obsolete system of planning." "So far, the production activity of the collective is being evaluated only according to plan fulfillment in banking terms. But, you know, this indicator does not correspond precisely with the nature of the work we do, nor can it reflect the degree of labor effort of the collective or its innovative trouble shooting".

There turns out to be a paradox: if you follow the state approach to business, you strive to turn out the product with the fewest expenditures, but then you find yourself among the laggards. Evidently, other indicators must be overriding such as the labor intensiveness in the repair and maintenance of ships, or the man hours and the range of skills in the work done. The specialists consider that planning also must be conducted in accordance with the three directions in agreement with the new structure of management.

Let us say the shipping service transmits to the base a list for the year of zero cycle work, of planned maintenance work complying with standard documentation, and the work requests of the ships. A BTOF planning group makes a basic estimate and a calculation of the work complying with the average number of specialists available. The layout of the plan will then be sent to the CCX [Shipping Service] for approval.

"In the first year, the volume of the urgent work",continues V. Temnikov, "is determined according to the actual expenditures". In the second year, after accumulating data about its labor intensiveness, it will be expressed as a percentage of the assigned zero cycle work and planned maintenance. Such indicators already have been introduced at several Leningrad enterprises, and they are called indicators of standard net production.

In practice, the shipping service cannot firmly determine the necessary volume of work with a breakdown into periods, and, in the planning procedure, the analysis of the technical condition of ships, with each of them taken separately, has not been systematized.

The Ship Repairer Goes on a Voyage

When a ship arrives at a ship repair plant, then everyone knows that it will stay, let's say, for three days. It is thus possible, planning-wise, to engage in repair. But when a motorship is in a port, it is not clear how long it will stay at any particular pier. Besides, it is not always possible to create the conditions in which repairmen can work. Now a fuel barge will come alongside and welding is not permitted; now loading of all five holds is conducted; now bad weather prevents work...

So they decided at the fleet maintenance base of the BMP not to wait at sea for the weather, but operationally to use any opportunity for carrying out work wherever a ship is. Thus the subsidiary bases at Kaliningrad and Vyborg were developed and the question of a subsidiary in Cuba is being decided. The creation of a subsidiary in Italy is in prospect. The base now deploys a group of specialists - 165 men - allowed to go out on voyages beyond the border. This has permitted the creation of teams which can be sent on voyages to carry out repair work. Presently, 100 workers are working in this way on 45 ships simultaneously. This is one of the potentials for raising the effectiveness of the technical service.

However, large problems in the management of this most important service remain unsolved. Formally, for example, socialist competition is to be conducted. But, since the production sections do not see the promise in the work, the assignments for a month or a ten day period simply are not distributed to them in good time. There are no bonus systems in pay for supplementary skills, therefore there are not many who desire to master them. This brings the necessity to send several workers to a ship to accomplish a simple assignment.

Always up to now, the base had no status whatsoever, but the typical attitude, which went out five years back, became obsolete. It is impossible to manage so large a collective by the former methods. But here there is no production-scheduling department, there are no works superintendents, and it is not regulated as to whom or how many are to work.

The technical service has been converted into a branch,and the question about creating a department in the ministry supervising the operations of such bases in all shipping companies has become ripe.

9136
CSO:1829

FINNISH PRESS; INCREASED FINN-USSR MARITIME COOPERATION

Helsinki HELSINGIN SANOMAT in Finnish 3 Sep 80 p 26

[Article: "Joint Maritime Commission Recommends: Finnish and Soviet Outfitters to Study Cooperation"]

[Text] The Joint Finnish-Soviet Maritime Commission decided in its recent meeting in Riga [Latvia] to recommend that outfitters and shippers of both countries begin to study the possibility for cooperation in ship traffic on certain long routes.

This could mean in practice the Far East, where a lot of Finnish industrial products go. Shipments could possibly be made cooperatively in either Finnish or Soviet vessels.

The Finns presently have no direct routes to the Far East, but one of the Finnlines ships visits there occasionally two or three times a year.

If cooperation in shipments can be arranged, a ship could take on cargo from both Finland and the Soviet Union for example. Many Finnish products such as paper and cellulose go in large quantities to Australia, Japan, and India, for example.

With the help of possible Finnish-Soviet cooperation on long routes, reloading of the ships could be avoided.

Finnish outfitters have sought and found cooperating partners in the West, so some should also be obtained in the East, despite differences in the economic systems. This is what Per Forsskahl, office manager of the Society of Finnish Outfitters, says.

The recommendation was made at Finland's initiative. and according to Forsskahl there is good reason to study it further. The amount of goods shipped to the Far East is not big enough for a separate shipping route, but one could be established together with the Soviet Union.

"Cooperation should be accomplished on the basis of equality, so that ships of both countries could carry each others' goods. The Soviet Union is a natural cooperating partner, since its routes to the Far East pass near Finland." This kind of cooperation has not existed among Finnish and Soviet outfitters up to now.

So called transit traffic, through Finnish harbors to the Soviet Union and from there onward to other countries, has increased greatly in recent years. This year, according to Hakon Guvenius, section head in the Ministry of Commerce and Industry, there will be some 1.5 million [metric] tons of such traffic, whereas the amount was previously under a million tons.

"Next year the amount of transit traffic could be 2 million tons and in 1982 perhaps 3 million," Guvenius estimates.

Transit traffic was a subject of discussion in the recent Riga metting of the Joint Maritime Commission between Finland and the Soviet Union.

9611
CSO: 3107

FINLAND MAY JOIN TALLINN PORT

Helsinki UUSI SUOMI in Finnish 29 Aug 80 p 17

[Article: "Part of Tallinn's Harbor Work May Come to the Finns"]

[Text] Finnish are negotiating at the enterprise level to participate in the work of expanding the harbor of Tallinn. This was reported by Dr Ahti Karjalainen, chairman of the economic commission of Finland and the Soviet Union, on Thursday, speaking at the dedication of the new oil pier at Hamina.

"In the July meeting of the economic commission, the Soviet side announced tentative interest in having Finns participate in the work of expanding the harbor at Tallinn," Karjalainen observed.

The initiative has progressed quickly to concrete discussions at the enterprise level, which according to Karjalainen is a good sign for cooperation and international division of labor and specialization between the two countries. Finnish engineering skill is also an exportable item.

"In terms of broader Finnish-Soviet cooperation, we must pay attention on our part to those things which it would be appropriate to accomplish through making use of the broad expertise of the Soviet side," said Karjalainen.

"On of the most notable possibilities for developing traffic between Finland and the Soviet Union is connected with the imbalance of traffic," said Karjalainen in dealing with outlooks for development of traffic between the countries.

"We continually have to return empty a large number of tank-cars and open cars with high-fenced sides," Karjalainen observed.

9611
CSO: 3107

MORE BALANCED TRAFFIC, INCREASE SOUGHT BETWEEN FINLAND, USSR

Helsinki HELSINGIN SANOMAT in Finnish 29 Aug 80 p 28

[Article: "Karjalainen at Dedication of Oil Port Expansion: Cooperation in Transportation Between Finland and Soviet Union Must be Developed"]

[Text] Hamina (HS) "One of the most notable possibilities for development of traffic between Finland and the Soviet Union is connected with balancing traffic between the east and west directions," said Ahti Karjalainen, acting director of the Bank of Finland, on Thursday at the dedication of the expansion of the oil port at Hamina.

Finland continually has to return empty a large number of tank-cars and open cars with high-fenced sides to the Soviet Union.

On the other hand, significantly more box cars are needed for export shipments from Finland than are brought into our country by shipments from the Soviet Union. Only the use of open cars with high-fenced sides has increased. Finns are now using half of these for transit shipments of dry goods to the Soviet Union, said director Karjalainen. In his opinion, a more efficient use of equipment than before will require, however, an investment in loading and unloading equipment and, most of all, a closer cooperation between the two sides.

Dr Karjalainen addressed the same matter in his speech that the southeast Finnish forest industry sought remedies for a day earlier in their seminar in Lappeenranta, where director Yrjo Jousmaki of Enso-Gutzeit even foresaw that transit traffic through eastern harbors on the Gulf of Finland would in the future weaken exports from our own country, if transit traffic between the Soviet Union and the west increases. In the opinion of the industry, the primary task of Finnish harbors is to handle our own foreign trade without disruption and efficiently.

Transit traffic has grown most rapidly precisely in the harbors of Kotka and Hamina in recent years, and particularly the growth in transit traffic dictated the expansion of Hamina's oil port.

In the opinion of Dr Karjalainen, who serves as Finnish chairman of the joint economic commission of Finland and the Soviet Union, the whole development of the harbors of southern Finland depends essentially also on what kind of decisions are made concerning development of the rail network.

"These in turn affect a possible decision to expand the harbor of Kotka and the coming need for a coal harbor. For their part, the needs of export between the Soviet Union and Finland on the one hand and shipments from the Soviet Union to third countries on the other depend on what kind of decisions will be made as time goes on regarding expanding other harbors on the Gulf of Finland, mainly Leningrad and Tallinn."

The significance to the city of Hamina of its oil port is more and more important. Last year traffic through the oil port was more than 800,000 [metric] tons, and this year it is expected to pass the million mark. Transit traffic is expected to continue to increase in coming years.

Expansion of the oil port cost the city 10 million marks. The length of the support portion of the pier is 72 meters, which means an additional foundation size of about 200 meters.

9611
CSO: 3107

OCEAN AND RIVER

BRIEFS

NIKOLAYEVSK SHIP REPAIR PLANT--The Nikolayevsk ship repair plant of the Amur River Steamship Line has completed construction of a 1,000-ton dry cargo barge 1 month ahead of schedule. This is the first large barge built at the plant after its reconstruction. The plant has acquired an additional production area by filling in the Amur River water area with gravel and sand and installing a slipway platform to be used for constructing vessels of 70 and more meters long. During the 11th 5-Year Plan period the plant will construct self-propelled tankers with 150-ton load-carrying capacity, which will be operating on the Amur, Amgun, Bureya and Ussuri rivers. [Khabarovsk Domestic Service in Russian 0930 GMT 22 Aug 80 SK]

DOCK TOWED TO BALTIC--A big floating dock of a new design has been built at Ilyichevsk, for servicing large ships. It will be used in the Baltic area. Its displacement is 15,000t. The dock will go to the Kanonerskiy shipyard in Leningrad. It is on the way there at the moment, escorted by the salvage tug Gerakl and the icebreaker Yuriy Lisyanskiy. This is the first time such a large structure has been towed from the Black Sea. The convoy has already passed through the Mediterranean and Atlantic parts of the route. [Moscow Domestic Service in Russian 2200 GMT 2 Sep 80 L]

VANINO-KHOLMSK FERRY TERMINAL--The first blasting work has been carried out at the construction site of the second stage of the Vanino-Kholmsk ferry terminal. The full estimated cost of the second stage project is R4.5 million. Major work will begin next year while at present the production base is being prepared. [Khabarovsk Domestic Service in Russian 0930 GMT 4 Sep 80 SK]

CSO: 1829

MISCELLANEOUS

PROGRESSIVE FORMS OF TRANSPORTATION FOR COAL, ORE CONCENTRATES

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 8, Aug 80 pp 89-96

[Article by Ye. Olofinskiy, deputy director, VNIIPItransprogress]

[Text] The November (1979) Plenum of the CPSU Central Committee emphasized the importance of solving transportation problems in connection with the growing volume of shipments of national economic cargoes in the country. Development of pipeline transport on priority was recognized to be necessary. The high level of planning and construction of main petroleum and gas pipelines attained in previous years and the known advantages of pipeline transport are increasing the sphere of its application more and more. Presently petroleum products, natural gas condensates, ammonium, and ethane are being pumped through pipes. Each year the network of existing pipelines is broadening. About 16,000 km of pipelines were built abroad in 1979 (not counting the Chinese Peoples' Republic). Each year the Soviet Union builds about 2,000 km of such pipelines. Construction of the world's largest ammonium pipeline from Tol'yatti to Odessa, 2,414 km long, will be finished in 1980.

Not only liquid and gaseous but also solid products may be pumped through pipe over great distances. Operation of the first hydraulic transport systems, which appeared in Europe at the beginning of the century, confirmed their economic effectiveness. In the 1970's a number of countries installed major slurry lines: The "Black Mesa" coal pipeline in the USA, which is 439 km long and which has an annual productivity of 5 million tons, has been in operation since 1971; built in Brazil in 1977, the "Samarko" concentrate pipeline is 400 km long and has a productivity of 12 million tons of iron ore concentrate per year.

In 1977-1979 specialists of the USSR Gosplan, the USSR State Committee for Science and Technology, the Minneftegazstroy [Ministry of Construction of Petroleum and Gas Industry Enterprises], the Minugleprom [USSR Ministry of Coal Industry], and the Minenergo [USSR Ministry of Power and Electrification] acquainted themselves thoroughly with the level of development of pipeline transport abroad in relation to solid materials. The results of studying

This experience showed that there is a tendency for accelerated development of main hydraulic transportation in the pumping of solid materials, primarily ore concentrates and coal.

A great deal of scientific research has been conducted on this problem in our country. However, the developments were not directed at creating industrial facilities, being limited only to studying, by way of small-scale experiments, certain processes in hydraulic transport technology.

The issue of conducting technical-economic studies with the goal of revealing the sphere of application of main pipeline hydraulic transport to move large volumes of bulk cargoes (coal, ore concentrates, and chemical industry products) was raised in 1976. Scientific research, planning, and design efforts at creating the country's first main hydraulic transport facilities were started. Many sector institutes as well as institutes of the USSR Academy of Sciences and the USSR Gosplan are taking part in these efforts.

Some of the results, the revealed spheres of application, and the planned stages for introducing this form of transport into the country's national economy are examined below.

Hydraulic Pipeline Transport of Coal

The essence of this method for transporting coal entails pulverizing the latter at the places of its extraction to a particle size of 2 mm and lower, mixing the particles with water at a proportion of approximately 1:1, and pumping this material through pipelines at a pressure of 70-100 atm to electric power plants, where following partial dehydration it is burned in boilers. The rate of movement of the slurry in the pipeline is maintained a little above a certain critical value (usually less than 1.5 meters/second), owing to which the flow of the slurry remains uniform and precipitation of the solid phase is averted. The intervals between pumping stations depend on the terrain and on the diameter of the pipeline, usually being 70-100 km. The pipeline is buried at about the depth of the zero isotherm to keep the slurry from freezing during long halts.

Two industrial pipelines have been built and are now operating in the Kuznetsk Basin: one to deliver coking coal with a particle size of up to 50 mm to the Belovskaya GRES, and one delivering coal to the enrichment plant of the West Siberian Metallurgical Combine. The concentration of coal in the slurry is only 10-15 percent by weight. The large size of the chunks of coal requires a higher pumping speed, and this results in significant wear of the pipes. But because the length of these coal pipelines does not exceed 10 km and because they are laid over the surface of the ground, special repair teams can regularly turn the pipes and replace completely worn sections by new inserts.

In 1977 the All-Union Scientific Research Institute of Integrated Fuel-Energy Problems and the Institute of Integrated Transportation Problems of the USSR Gosplan, working jointly with the All-Union Scientific Research and Planning-Design Institute of Pipeline and Container Systems of the Minneftegazstroy (VNIIPItransprogress), made long-range comparative evaluations of the technical-economic indicators for transportation of coal from the Kuznetsk Basin and Kansk-Achinsk coal refinement products by rail and by pipeline to the Ural region and to the country's European region, using a shipment volume of 85 million tons of comparison fuel per year. The results are shown in Table 1.

Table 1

Form of Fuel	Form of Transportation	Distance, km	Corrected Outlays, Rubles/ton Comparison Fuel*
Coal:			
Kuznetsk Basin	Railroad	3,900	12.3
	Coal Pipeline	3,200	7.8
Kansk-Achinsk Semicoke	Railroad	3,800	11.9
	Coal Pipeline	3,200	7.9

* Includes preparation of coal for transportation and delivery from the mainline to consumers within a radius of 300 km.

As we can see from the data in this table, outlays would be 1.5 times less with erection of pipelines than with construction of a new railroad to transport the same quantity of fuel. Construction of coal pipelines would require about 5.5 times fewer workers, and their operation would require 12 times fewer maintenance personnel in comparison with a railroad of comparable traffic capacity, and the savings of metal would be about 25 percent.

By decision of the governing board of the USSR Gosplan (12 September 1978), work is continuing to refine the technical-economic indicators of using hydraulic transport to deliver large volumes of coal for power production from the Kuznetsk Basin to thermal electric power plants in the Ural region, the Volga region, and the country's center.

The economic effectiveness of pipeline transportation of coal increases both with increasing rate of flow and with increasing distance. The former is a general property of main pipeline transport, for which it is typical that as the diameter of the pipeline increases, outlays on erection and operation increase out of proportion with the growth of the pipeline's productivity, and therefore the unit cost indicators decrease as the rate of flow rises. The latter is associated with the fact that outlays to prepare slurry for transportation and to prepare coal for combustion at an electric power plant do not depend on the delivery distance, and transportation outlays increase with increasing distance. Therefore as the transportation distance rises, the proportion of outlays on initial and final operations within the total outlays decreases, and the effectiveness of the entire hydraulic transport complex rises.

Figure 1 shows the results of computations characterizing the dependence of unit corrected outlays on creating and operating main coal hydraulic transport systems 2,000 km long on the cargo traffic volume.

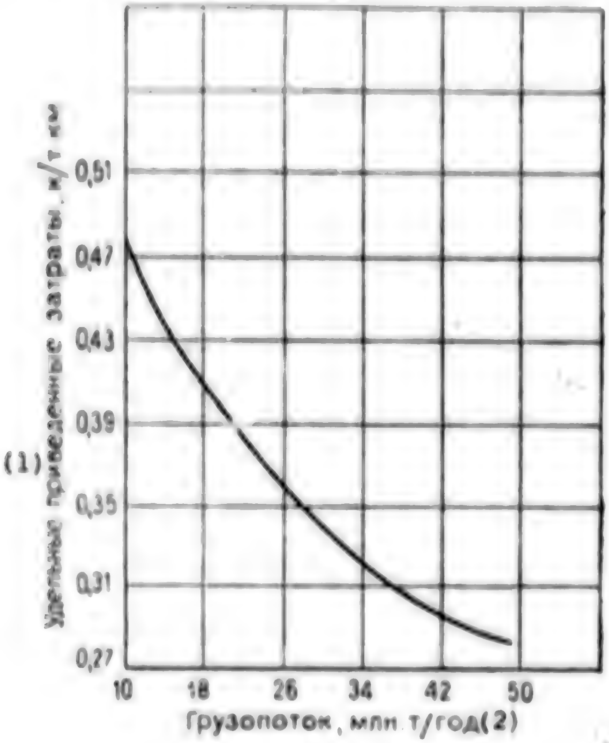

Figure 1

Key:

1. Unit corrected outlays, kopecks/ton·km
2. Cargo traffic volume, million tons/year

An analysis of the structure of the corrected outlays on hydraulic transportation of coal would show that at an annual pipeline productivity of just 40 million tons of coal and a length of 2,000 km, the proportion of outlays required to prepare the coal for transportation and to dehydrate the slurry at the electric power plant is about 20 percent.

These data permit the conclusion that coal hydraulic transport systems may be competitive with the railroads. And although the effectiveness of using a coal pipeline should be evaluated in relation to each concrete case, we can tentatively point out that creation of coal hydraulic transport systems produces an economic impact with a cargo traffic volume as low as 10-15 million tons per year and a transportation distance as low as 300-500 km.

Creation of an experimental industrial pipeline from the city of Belovo ("Inskaya" Mine) to Novosibirsk (TETs-5) has been foreseen with the goal of accelerated introduction of main pipeline transport to convey large amounts of Kuznetsk Basin coal to the central regions of the country; 250 km long, this pipeline will carry 4.3 million tons of coal per year. Jointly with the Minneftegazstroy and the USSR Minenergo, the USSR Minugleprom is to plan and build this coal pipeline, and put it into operation in 1984. All of the production processes associated with it have been worked out, to include preparation of the coal for transportation, pumping of the slurry through the pipeline, and its preparation for burning at the electric power plant; the pumping equipment and the fittings have also been tested under industrial operating conditions. Preparations are concurrently being made for the planning of large coal pipeline systems with a capacity of 40-60 million tons per year and a length of up to 2,000-3,000 km.

For the moment the scientific research and the planning and design efforts are being aimed at creating main hydraulic systems to transport coal from the Kuznetsk Basin. But this does not mean that the problem of transporting Kansk-Achinsk coal larger distances cannot be solved with coal pipelines. Brown coal from the Kansk-Achinsk Basin, which has a high moisture content, can be conveyed by pipeline at a weight concentration of solid matter in the slurry of up to 40-45 percent, but in this case the cost of delivering 1 ton of comparison fuel is greater than that permissible, mainly due to the low calorie content of the initial coal, equal to 3,400-3,500 kcal/kg. Moreover we have not yet found effective methods for dehydrating brown coal slurry.

The Institute of Power Engineering imeni G. M. Krzhizhanovskiy of the USSR Minenergo and the Institute of Combustible Minerals of the USSR Minugleprom are working on different variants of methods for processing Kansk-Achinsk coal. These institutes have obtained high-calorie processing products with experimental set-ups; when tested in a hydrodynamic stand, these products demonstrated good results from the standpoint of maintaining the required slurry pumping parameters. Technical difficulties do not arise in separation of moisture from slurry containing preprocessed brown coal.

Thus the economic feasibility of creating main pipelines to pump coal out of the Kansk-Achinsk Basin depends mainly on the time required for industrial assimilation of the methods for processing such coal, and the technical-economic indicators of the methods.

Pipeline Hydraulic Transport of Ore Concentrates

In contrast to hydraulic coal transport, pipeline hydraulic transport of ore concentrates fits fully within the methods for processing and utilizing these materials; thus creation of additional complex systems to prepare the product for pumping and for its subsequent use is not required. The product of settling tanks at the enrichment plant--that is, concentrate slurry, in which the weight content of solid matter is made optimum, usually 60-70 percent--is fed to the main reservoirs of the concentrate pipeline. The slurry coming in through the concentrate pipeline is filtered at the sintering plant.

Inasmuch as the unit weight of ore concentrates is three to four times greater than that of coal, and because rather dense slurry is transported, the cargo capacity of the pipeline rises significantly, and consequently the consumption of metal per ton of delivered cargo decreases. For comparison, Figure 2 shows change in cargo capacity of pipelines of different diameters pumping coal and iron ore concentrate.

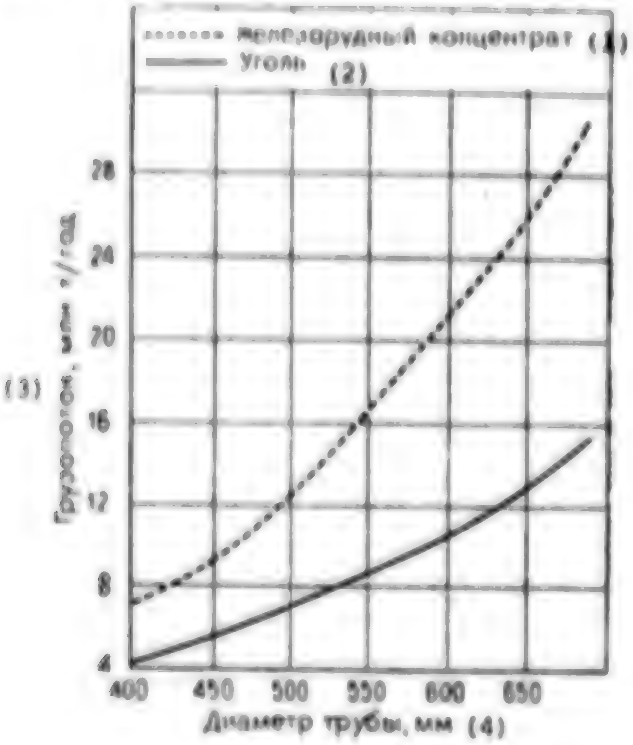

Figure 2.

Key:

1. Iron ore concentrate
2. Coal
3. Cargo traffic volume, million tons/year
4. Pipe diameter, mm

Table 2 compares systems of different productivities for hydraulic transport of iron ore concentrate for a distance of 1,000 km.

From the standpoint of economic effectiveness the sphere of application of pipeline transport of ore concentrates (in contrast to coal) is not limited by the cargo traffic volume and the transportation distance, inasmuch as expensive facilities need not be erected at the end of the pipeline.

Creation of main pipeline systems for hydraulic transport of metal concentrates and chemical industry products is especially promising in our

Table 2

	Estimated Technical-Economic Indicators for Cargo Traffic Volumes of the Following Amounts, Million Tons/Year	
	5	25
Pipeline diameter, mm	325	730
Unit capital investments, kopecks/ton·km	2.6	1.00
Unit corrected outlays, kopecks/ton·km	0.6	0.25
Cost, kopecks/ton·km	0.3	0.15
Unit energy outlays, kw·hr/ton·km	0.07	0.06

country, considering first of all the large volume of raw materials being extracted and processed, and second the locations of the mining and concentration combines and consumers in different geographic regions.

The first steps have been made to introduce pipeline transport into the national economy. Construction of a hydraulic transport system to deliver 6.5 million tons of iron ore concentrate per year from the Lebedin Mining and Concentration Combine to the electrometallurgical combine in Staryy Oskol was started in 1978. The length of the pipeline is 26 km. Construction of a 30-km slurry pipeline carrying copper-nickel concentrates is nearing completion at the Noril'sk Metallurgical Combine.

Completed scientific research and developments are to be used as a foundation for creating a scientific-technical and production base intended for broad introduction of pipeline transport into metallurgy, chemistry, and other industrial sectors; a pipeline 460 km long is to be built to transport 14 million tons of iron ore concentrate from Krivoy Rog (the Ingulets GOK [Mining and Concentration Combine]) to the Yasinovataya Sintering Plant in the Donets Basin. Organizations of the Ministry of Chemical and Petroleum Machine Building, the Ministry of Installation and Special Construction Work, the USSR Academy of Sciences, the Ukrainian SSR Academy of Sciences, and others are taking part in the work besides the USSR Minneftegazstroy and the USSR Ministry of Ferrous Metallurgy. Inasmuch as this is the first time such a hydraulic transport system is being created in the Soviet Union, there are plans for building a large experimental facility at the Ingulets GOK, where both the parameters of the process for pumping iron ore concentrate slurry and models of the hydraulic transport equipment will be worked on.

Using balance accounts and the master plan for development and distribution of ferrous metallurgy as its basis, the USSR Ministry of Ferrous Metallurgy has suggested examining the possibilities for creating hydraulic transport pipeline systems to move iron ore concentrates from large deposits to the metallurgical plants: from the Kachkanar GOK to the Magnitogorsk Metallurgical Combine, from the Lisakovsk GOK to the Karaganda Metallurgical Combine, from the GOK's of the Krivoy Rog Basin to the Plant imeni Il'ich (in Zhdanov), and so on.

The problem of developing and assimilating high-pressure hydraulic pipeline transport has great significance to developing and insuring uninterrupted operation of existing and new mining-concentration combines in nonferrous metallurgy. There are a number of important remote deposits near which it is impossible or unfeasible to erect concentration plants. Pipeline hydraulic transport of pulverized ores and concentrates may play the decisive role in their development.

According to data of the All-Union Institute of Mechanical Processing of Minerals, high-pressure hydraulic transportation of concentration products and ores would be suitable in association with reconstruction of the Gorevskiy and Zhayremskiy GOK's, the Almalyk and Tyrnauz mining-metallurgical combines, and construction of the Karagaylinskiy GOK.

Introduction of hydraulic pipeline systems may have great significance to solving the problem of conveying iron ore concentrates and chemical industry products from enterprises of the Kola Peninsula. About 8 million tons of products are transported every year by rail for a distance of approximately 1,500 km from the Olenegorsk and Kovdor GOK's to the Cherepovets Metallurgical Combine.

Apatite concentrate (produced by the "Apatit" Production Association) is also conveyed by rail. Moreover because of the limited traffic capcity of rail transportation, nepheline, a valuable raw material, is left virtually unutilized. The Ministry of Chemical Industry plans to increase production of apatite concentrate transported into Leningrad Oblast (to 10 million tons per year). We must also assimilate the same traffic volume of nepheline concentrate, which is presently being conveyed in the same direction to provide raw materials for the alumina plant in Pikulevo.

Considering these circumstances, it would be suitable to prepare the technical-economic grounds for creating a network of main slurry pipelines to transport ore concentrates (apatite, nepheline, iron ore concentrate) from the Kola Peninsula to industrial regions of the country's northwest. The natural conditions of these regions favor construction of hydraulic pipelines. The mean monthly temperatures of the ground are above 0°C at a depth of 1.6-1.8 meters, and therefore there would be no technical difficulty in maintaining the required temperature conditions for the slurry pipeline, assuming that the pipes are laid under ground.

When developing the technical-economic grounds, we must examine different variants of integrated use of different forms of transportation--rail, water, pipeline--with the goal of achieving the greatest economic impact in solution of this problem. Therefore it would be suitable to have scientific research and planning institutes of the Minneftegazstroy, the USSR Ministry of Ferrous Metallurgy, the USSR Ministry of Nonferrous Metallurgy, the Minkhimprom, the Ministry of Railways, and the RFSFR Ministry of the River Fleet take part in this work. According to preliminary data the total volume of metal concentrates and chemical products in the country, delivery of which could be shifted from the railroads to main pipeline hydraulic transport, would be about 50-70 million tons per year in the next 10 years.

Before we can create main pipeline hydraulic transport of coal, ore concentrates, and other solid materials and introduce such transport into the national economy, we would have to solve some scientific-technical problems and implement the appropriate organizational measures. Introduction of main slurry pipelines to transport large volumes of raw materials would require hasty assimilation of production of domestic equipment, mainly pumps and fittings.

Completion of the planned program for construction of pipeline hydraulic transport facilities would require creation of the following in the 11th Five-Year Plan by the Ministry of Chemical and Petroleum Machine Building and the Ministry of Heavy and Transport Machine Building: high-capacity slurry pumping units; centrifugal pumps capable of handling large amounts of slurry; dependable wear-resistant pipeline fittings, to include flush ball cocks, reflux valves, and other forms of equipment.

Domestic pumping equipment must be created and perfected on priority, so that it could be used in place of the installed imported equipment (upon expiration of its operating period, as foreseen by contract conditions) in the operation of hydraulic transport systems conveying ore concentrates at the Staryy Oskol Electrometallurgical Combine and the Noril'sk Combine.

Measures aimed at creation and industrial assimilation of the production of pipes with improved mechanical properties, insuring long life in the face of the corrosive and erosive effects of slurry, have been coordinated with organizations of the USSR Ministry of Ferrous Metallurgy and the USSR Academy of Sciences. Several directions for solving this problem have been determined: use of high-quality steel, development of the processes and equipment for production of bimetallic pipes with an inner layer of wear-resistant stainless steel, and use of an industrial process to apply coatings (polymer, enamel) to the inner surface of pipes.

The results of analyzing the present state and prospects of development of main pipeline hydraulic transport show that the need for using this form of transport has become urgent in our country, and that the necessary conditions for using it are available. I am referring mainly to the remoteness of the places of extraction and consumption of coal and raw materials required by ferrous and nonferrous metallurgy and by chemical industry, the rapid growth of the extraction volume, and consequently the growth of the amount of raw materials to be transported.

At the same time introduction of slurry pipeline transport is proceeding mainly on the basis of achievements in construction of main petroleum and gas lines, and this sector has enjoyed significant development in our country. The time required to erect main pipelines has been reduced significantly through the application of industrial construction methods. The procedures for laying large-diameter pipe in the complex conditions of the North and West Siberia have been assimilated. Thus considering the problems associated with the specific features of moving solid materials in pipelines, creation of large hydraulic transport systems is a real task of the near future.

As was noted at the November (1979) Plenum of the CPSU Central Committee, a long-range integrated program that will account for the best achievements of scientific-technical progress is presently being developed as a means for radical solution of transportation problems. The program for creating a new form of pipeline transport--main hydraulic transport of solids--is an inherent part of the overall program for development of transportation. As we write the plan for economic and social development of the country in 1981-1985, it is important for us to foresee, for the cooperating ministries, specific volumes of work associated with research, planning, and construction of pioneer systems for hydraulic transportation of solids, and to allocate the necessary assets for creation of scientific-technical and production bases to permit subsequent broad introduction of effective pipeline transport of coal and ore concentrates.

COPYRIGHT: Izdatel'stvo "Ekonomika", "Planovoye khozyaystvo", 1980

11004
CSO: 1822

MISCELLANEOUS

NEWSPAPER ADVERTISES TRANSPORT SERVICES TO IRAN

By FESCO Vessels, Trains

Moscow MOSCOW NEWS in English No 37, 21-28 Sep 80 p 15

[Advertisement]

[Text] FAR EAST-IRAN via CAUCASUS

A Reliable and Beneficial Container Landbridge via USSR Territory

by TSCS--Trans-Siberian Container Service
and TCCS--Trans-Caucasian Container Service

Shipments from/to nine major ports in Japan, also Manila, Hong Kong, Bangkok to/from the port of Vostochny by modern container vessels of FESCO--Far-Eastern Shipping Company and further by express block-trains to Djulfa on the Soviet-Iranian border.

Daily Sailings from/to Japan

By Baltic Vessels, Trains

Moscow MOSCOW NEWS in English No 35, 7-14 Sep 80 p 4

[Advertisement]

[Text] TCCS

TRANS-CAUCASIAN
CONTAINER SERVICE

Shortest Container Route from Europe to Iran

Containers by fast ships from any major port in Europe to Leningrad-Riga-Tallinn-Klaipeda. Further by rail to DJULFA

WEEKLY SAILINGS

From each port are offered by Baltic Shipping Company
Latvian Shipping Company
Estonian Shipping Company

Information on Sailings and shipment is available from local agents or the Owners:

Baltic Shipping Company
5, Mezhevoy kanal
Leningrad 198035 USSR
Cable: Morflot Leningrad
Telex: 121501, 121514, 121542,
121563, 121561

Latvian Shipping Company
2, Boulevard Padomiu
Riga USSR
Cable: Morflot Riga
Telex: 161110, 161121, 161122,
161123

Estonian Shipping Company
3/5, Boulevard Estonia
Tallinn USSR
Cable: Morflot Tallinn
Telex: 173272

Any other enquiries to the TCCS General Operator

V/O "Sojuztransit"
32/34, Smolenskaya-Sennaya
Moscow USSR
Cable: Soltra Moscow
Telex: 7266 7291 7292

END

CSO: 1812

END OF FICHE

DATE FILMED

Oct 20, 1980